

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

1-8. (Canceled)

9. (Currently Amended) A method of manufacturing an optical component, the optical component comprising a substrate having an optical surface, and a mounting frame for mounting the substrate, the method comprising:

assembling the optical component by mounting the substrate on the mounting frame, the mounting frame comprising a support member and plural attachment members, the support member having a structure of a closed ring, the plural attachment members being connected to the support member at plural locations on the support member and separated from one another, the substrate being mounted to the mounting frame via the plural attachment members such that an optical axis of the substrate is positioned inside the closed ring;

measuring a shape of the optical surface of the substrate; and

physically processing the optical surface of the substrate such that the optical surface is modified by said processing;

wherein the substrate is mounted on the mounting frame including the support member during the measuring of the shape of the optical surface and the processing of the optical surface.

10. (Original) The method according to claim 9, wherein the substrate remains permanently mounted on the mounting frame during the measuring of the shape of the optical surface and the processing of the optical surface.

11. (Previously Presented) The method according to claim 9, wherein the mounting frame comprises more than three attachment members.

12. (Original) The method according to claim 9, wherein the mounting frame of the optical component is designed to be mounted to at least one adjacent mounting frame in an

optical system, the method further comprising mounting the mounting frame to the at least one adjacent mounting frame and measuring the shape of the optical surface of the substrate while the mounting frame is mounted to the at least one adjacent mounting frame.

13. (Original) The method according to claim 9, further comprising determining differences between the shape of the optical surface and a target shape thereof, wherein the processing of the optical surface is carried out in dependence of the determined differences.

14. (Original) The method according to claim 9, wherein the optical component is designed for being mounted in an optical system such that the substrate has a predetermined orientation with respect to a direction of gravity, and wherein the measuring of the shape of the optical surface of the substrate is performed while the substrate is disposed in an orientation with respect to the direction of gravity which is substantially the same as the predetermined orientation

15. (Original) The method according to claim 9, wherein the processing of the optical surface is carried out by at least one of magneto-rheological fluid processing, ion beam processing, fluid jet processing, chemical and/or mechanical polishing, etching, milling, grinding, and hot or cold coating processes.

16. (Original) The method according to claim 9, wherein the measuring of the shape of the optical surface is carried out by at least one of interferometric measurement, measurement involving tactile coordinates, and measurement involving pattern projection.

17-19. (Canceled)

20. (Currently Amended) A method of manufacturing an optical system having plural optical components, wherein at least one optical component of the plural optical components comprises a substrate having an optical surface, and a mounting frame for mounting the substrate, the method comprising:

assembling the at least one optical component by mounting the substrate on the mounting frame, the mounting frame comprising a support member and plural attachment members, the support member having a structure of a closed ring, the plural attachment

members being connected to the support member at plural locations on the support member and separated from one another, the substrate being mounted to the mounting frame via the plural attachment members such that an optical axis of the substrate is positioned inside the closed ring;

measuring a shape of the optical surface of the substrate; and

physically processing the optical surface of the substrate such that the optical surface is modified by said processing;

wherein the substrate is mounted on the mounting frame including the support member during the measuring of the shape of the optical surface and the processing of the optical surface;

the method further comprising assembling the plural optical components to form the optical system.

21-22. (Canceled)

23. (Currently Amended) A method of manufacturing an optical component, the optical component comprising a substrate and a mounting frame for mounting the substrate, the substrate having an optical surface, the method comprising:

mounting the substrate on the mounting frame, the mounting frame comprising a support member and plural attachment members, the plural attachment members being connected to the support member at plural locations on the support member, the support member having ~~a ring shape~~ a structure of a closed ring, the plural attachment members being separated from one another along a circumference associated with said ring shape, the substrate being mounted to the mounting frame via the plural attachment members such that an optical axis of the substrate is positioned inside the closed ring;

measuring a shape of the optical surface of the substrate while the substrate is mounted on the mounting frame including the support member; and

physically processing the optical surface of the substrate while the substrate is mounted on the mounting frame such that the optical surface is modified by said processing.

24-25. (Canceled)

26. (Previously Presented) The method of claim 9, wherein the mounting frame is configured to support the substrate in an optical system for which the optical component is designed.

27. (Canceled)

28. (Currently Amended) The method of claim 9, wherein ~~the support member comprises a ring-shaped member~~ the closed ring has a circular shape.

29. (Previously Presented) The method of claim 9, wherein the support member comprises a continuous member that supports the plural attachment members.

30. (Previously Presented) The method of claim 23, wherein the mounting frame is configured to support the substrate in an optical system for which the optical component is designed.

31. (Canceled)

32. (Currently Amended) The method of claim 23, wherein ~~the support member comprises a ring-shaped member~~ the closed ring has a circular shape.

33. (Previously Presented) The method of claim 23, wherein the support member comprises a continuous member that supports the plural attachment members.

34. (Currently Amended) A method of manufacturing an optical component, the optical component comprising a substrate and a mounting frame for mounting the substrate, the substrate having an optical surface, the method comprising:

mounting the substrate on the mounting frame, the mounting frame comprising a support member and plural attachment members, the support member having a structure of a closed ring, the plural attachment members being connected to the support member at plural locations on the support member and separated from one another, the substrate being mounted to the mounting frame via the plural attachment members such that an optical axis of the substrate is positioned inside the closed ring;

measuring a property of the substrate while the substrate is mounted on the mounting frame; and

physically processing the optical surface of the substrate while the substrate is mounted on the mounting frame such that the optical surface is modified by said processing.

35. (Previously Presented) The method of claim 34, wherein said mounting the substrate on the mounting frame comprises mounting the substrate on the mounting frame via plural attachment members, the attachment members being attachable to the substrate.

36. (Previously Presented) The method of claim 34, wherein the mounting frame is configured to support the substrate in an optical system for which the optical component is designed.

37. (Canceled)

38. (Currently Amended) The method of claim 34, wherein ~~the support member comprises a ring-shaped member~~ the closed ring has a circular shape.

39. (Previously Presented) The method of claim 34, wherein the support member comprises a continuous member that supports the plural attachment members.

40. (Previously Presented) The method of claim 20, wherein the mounting frame is configured to support the substrate in an optical system for which the optical component is designed.

41. (Currently Amended) A method of manufacturing an optical component, the optical component comprising a substrate and a mounting frame for mounting the substrate, the substrate having an optical surface, the method comprising:

mounting the substrate on the mounting frame such that a contact between the substrate and the mounting frame extends over a substantially continuous peripheral region near a periphery of the substrate, the mounting frame having a structure of a closed ring;

measuring a property of the substrate while the substrate is mounted on the mounting frame, the substrate being arranged such that an optical axis of the substrate is positioned inside the closed ring; and

physically processing the optical surface of the substrate while the substrate is mounted on the mounting frame such that the optical surface is modified by said processing.

42. (Previously Presented) The method of claim 41, wherein the mounting frame is configured to support the substrate in an optical system for which the optical component is designed.